

## CLAIMS

1. A hydraulic motor having
- a non-rotating annular outer casing (1),
  - moving eccentric means (11, 12, 8) inside the outer casing,
  - 5 - a power shaft (5) connected to the eccentric means and rotatable thereby,
  - a pressure chamber arrangement (14 to 17) communicating with the eccentric means for moving the eccentric means and thus rotating the power shaft (5) by means of hydraulic fluid, steam or pressurized air led into and removed from the pressure chamber arrangement, and
  - 10 - a non-rotating annular inner casing (3) inside the non-rotating annular outer casing (1),
- characterized** in that
- the eccentric means comprise an eccentric part (8) formed in the
  - 15 power shaft (5), a first eccentric ring (11) between the outer casing (1) and the inner casing (3), and a second eccentric ring (12) mounted with bearings around the eccentric part of the power shaft and connected fixedly and concentrically to the first eccentric ring, whereby
  - the pressure chamber arrangement (14 to 17) is located between
  - 20 the first eccentric ring (11) and the inner casing (3) in such a manner that the first eccentric ring drives the power shaft (5) through the second eccentric ring, and
  - the first and second eccentric rings (11, 12) form a substantially non-rotating entity that only performs an eccentric movement and makes the
  - 25 power shaft (5) rotate by means of this eccentric movement.
2. A hydraulic motor as claimed in claim 1, **characterized** in that the pressure chamber arrangement (14 to 17) is divided into at least two equal-sized parts by means of divider means (18) arranged through the inner casing (3) and arranged to be in close contact with the inner surface of the first
- 30 eccentric ring (11) and the outer surface of the second eccentric ring (12) and to move radially in relation to the inner casing guided by the eccentric rings.
3. A hydraulic motor as claimed in claim 1 or 2, **characterized** in that to balance the eccentric forces, a balancing arc (20) fastened to the power shaft (5) is arranged between the outer casing (1) and the eccentric

ring (11), the arc (20) being located on the opposite side of the power shaft (5) in relation to the eccentric part (8) of the power shaft.

4. A hydraulic motor as claimed in any one of the preceding claims, **characterized** in that intake and outlet channels (21, 22) are arranged  
5 to the inner casing (3) for leading hydraulic fluid, steam or pressurized air to the pressure chamber arrangement (14 to 17) and away from it.

5. A hydraulic motor as claimed in claim 4, **characterized** in  
that a feeding apparatus (25) connected to the intake and outlet channels (21,  
22) is fastened to the side of the motor to rotate hydraulic fluid, steam or pres-  
10 surized air through the pressure chamber arrangement (14 to 17).

6. A hydraulic motor as claimed in claim 5, **characterized** in  
that the feeding apparatus (25) is a mechanical rotating valve.